



WHAT IS CLAIMED IS:

A semiconductor chip package comprising:

a substrate having a plurality of bonding pads;

a semiconductor chip having a plurality of conductive bumps on a front side thereof, the conductive bumps contacting the bonding pads;

a heat slug bonded to a backside of the semiconductor chip; and

a solder film that bonds the heat slug to the backside of the semiconductor chip...

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The semiconductor chip package of claim 1, wherein the solder film includes one selected from a group consisting of Pb, Sn, Ag, In, and Bi.

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The semiconductor chip package of claim 1 wherein the backside of the semiconductor chip includes a metal layer formed thereon for strengthening the adhesion between the semiconductor chip and the metal film.

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The semiconductor chip package of claim 3 wherein the metal layer is a multi-layered film selected from a group consisting of VNi/Au, Ti/VNi/Au, Cr/VNi/Au, Ti/Pt/Au, Cr/CrCu/(Cu)/Au, TiW/(Cu, NiV)/Au, VNi/Pd, Ti/VNi/Pd, Cr/VNi/Pd, Ti/Pt/Pd, Cr/CrCu/(Cu)/Pd and TiW/(Cu, NiV)/Pd.

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The semiconductor chip package of claim 1, wherein a space between the semiconductor chip and the substrate is filled with an underfilling material.





- 6. The semiconductor chip package of claim 1, wherein the solder film has a size equal to or lager than a size of the semiconductor chip.
- 5 7. The semiconductor chip package of claim 1, wherein the heat slug is formed of a material selected from a group consisting of Cu, Al, and CuW.
- 8. The semiconductor chip package of claim 1, wherein the heat slug comprises an adhesion layer formed on a surface of the heat slug that contacts the solder film.
- 9. The semiconductor chip package of claim 8, wherein the adhesion layer is a layer selected from a group consisting of a Ni/Au layer, a Ag layer, and a Pd layer.
 - 10. The semiconductor chip package of claim 1, wherein the heat slug is coated with an anodizing layer.
- 11. The semiconductor chip package of claim 1, wherein the heat slug is shaped such that a portion of the heat slug is attached to the substrate by an adhesive..
- 12 The semiconductor chip package of claim 11, wherein the 25 adhesive includes silicon rubber or elastomer.
 - 13. The semiconductor chip package of claim 1, wherein a plurality of throughholes are formed on the heat slug.
- 14. A method of fabricating a semiconductor chip package, comprising:

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preparing the semiconductor chip having a plurality of conductive bumps on a front surface of the semiconductor chip;

bonding a heat slug on a backside of the semiconductor chip using a solder film; and

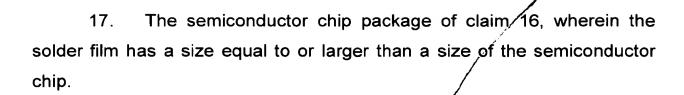
attaching the semiconductor chip on a substrate such that the conductive bumps of the semiconductor chip contacts a plurality o bonding pads on the substrate.

- 15. The method of claim 14, further comprising filling a space between the semiconductor chip and the substrate.
 - 16. A semiconductor chip/package comprising:
 - a substrate having a plurality of bonding pads;
- a semiconductor chip having a plurality of conductive bumps on a front side thereof, the conductive pumps contacting the bonding pads;
- a heat slug bonded to a backside of the semiconductor chip, the heat slug comprising a top portion, side standing portions bent from the top portion, and side end portions bent again from the side standing portions; and
- a solder film that bonds the heat slug to the backside of the semiconductor chip,
- wherein the top portion of the heat slug contacts the conductive solder film and the side end portions of the heat slug are attached to the substrate by an adhesive.

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- 18. The semiconductor chip package of claim 16, wherein the heat slug is formed of a material selected from a group consisting of Cu, Al, and CuW.
- 19. The semiconductor chip package of claim 16, wherein the heat slug comprises an adhesion layer formed on a surface of the heat slug that contacts the solder film.
- 20. The semiconductor chip package of claim 16, wherein the heat slug is coated with an anodizing layer.